

Please replace claim 10 with the following amended version thereof to incorporate the changes on the accompanying mark-up page:

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- 1 10. (Amended) A method of regulating a concentration of methanol in a direct methanol fuel cell system comprising the steps of:
- 2
- 3 using a detector to sense changes in an output power level of said fuel cell and producing a signal indicative of said changes; and
- 4
- 5 using said signal to drive a concentration regulator which responsively actively controls, by increasing or decreasing, the amount of methanol supplied to said fuel cell's
- 6
- 7 anode in response to changes sensed in said output power level.

Please replace claim 28 with the following amended version thereof to incorporate the changes on the accompanying mark-up page:

- ad
- 1 28. (Amended) A method of regulating a concentration of fuel in a direct oxidation fuel cell system comprising the steps of:
- 2
- 3 sensing changes in potential at an anode or load level of said fuel cell system; and
- 4
- 5 using said sensed changes in potential to drive a concentration regulator which responsively actively controls, by increasing or decreasing, the amount of methanol
- 6
- 7 supplied to said fuel cell's anode when said power level increases and decreases, thereby minimizing cross-over of methanol through said fuel cell's membrane electrolyte.
- 8

(Please add the following new claim 37)

- ab
- 1 37. (New) The method of regulating a concentration of methanol in a direct methanol fuel cell system, as defined in claim 10, including the further step of
- 2

3 when said detector senses a low output power level of said fuel cell and said concen-
4 tration regulator indicates a high concentration of methanol, using said signal to drive said
5 concentration regulator to responsively decrease the amount of methanol supplied to said an-
6 ode thereby substantially minimizing cross-over of methanol through said fuel cell's mem-
7 brane electrolyte.

(Please add the following new claim 38:)

1 38. (New) The method of regulating a concentration of methanol in a direct methanol
2 fuel cell system, as defined in claim 10, including the further step of
3 when said detector senses a high output power level of said fuel cell and said concen-
4 tration regulator indicates a low concentration of methanol, using said signal to drive said
5 concentration regulator to responsively increase the amount of methanol supplied to said an-
6 ode thereby providing optimal methanol concentration while substantially minimizing cross-
7 over of methanol through said fuel cell's membrane electrolyte.

(Please add the following new claim 39:)

1 39. (New) The method of regulating a concentration of methanol in a direct methanol
2 fuel cell system as defined in claim 28 including the further step of
3 when a change in said potential of said fuel cell indicates an increase in a high power
4 operating fuel cell, and methanol concentration indicated by said concentration regulator is
5 low, using said signal to drive said concentration regulator to responsively increase the
6 amount of methanol supplied to said fuel cell's anode, to produce an optimal amount of
7 methanol being supplied to said anode, while substantially minimizing methanol crossover.

(Please add the following new claim 40:)

1 40. (New) The method of regulating a concentration of methanol in a direct methanol
2 fuel cell system as defined in claim 28 including the further step of
3 when a change in said potential of said fuel cell indicates an increase in a low power
4 operating fuel cell, and methanol concentration indicated by said concentration regulator is

5 high, using said signal to drive said concentration regulator to responsively decrease the
6 amount of methanol supplied to said fuel cell's anode, to substantially minimize methanol
7 crossover.
